

THE EFFECT OF LEISURE ACTIVITIES ON LIFE SATISFACTION: The Importance of Holiday Trips

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In recent years, the phenomenon of happiness has been receiving increased interest. People want to know what can possibly make them happier. Generally speaking, there are two ways to improve happiness, one is to change one's view on life and the other is to change one's way of life. The latter way is promising since approximately 40% of variance in happiness is attributable to intentional activity (Lyubomirsky, Sheldon, & Schkade, 2005). Still, there is a lack of knowledge of what ways of life are the most satisfying and, in particular, about the happiness revenues of different leisure activities.

1 RESEARCH INTO HAPPINESS AND LEISURE

Happiness researchers are quite knowledgeable on the subject of work but less so on leisure. The World Database of Happiness currently lists 585 correlations between work and happiness and only 91 correlations between leisure activities and happiness (Veenhoven, 2008). Thus, the effect of work on happiness is a well-explored area of research, but far less is known about how participating in leisure activities affects happiness. Work, leisure, and happiness are interrelated (Haworth, 1997). For example, the number of working hours has a strong negative effect on leisure satisfaction, whereas the effect of the number of hours spent on leisure has only a small positive effect on leisure satisfaction (Van Praag, Frijters, & Ferrer-i-Carbonell, 2003).

1.1 Happiness and Leisure Satisfaction

The subjective evaluation of different aspects of life is known to correlate fairly strongly with life satisfaction (Ateca-Amestoy, Serrano-del-Rosal, & Vera-Toscano, 2008; Lloyd & Auld, 2002; Van Praag & Ferrer-i-Carbonell, 2004; Van Praag et al, 2003). Evaluations of finance, health, and job satisfaction, together with leisure satisfaction are the four most important correlates (Van Praag et al., 2003). Ateca-Amestoy et al. (2008) and Spiers and Walker (2009) find positive associations between leisure satisfaction and life satisfaction. Neal et al. (1999) constructed a model based on the assumption that "life satisfaction is functionally related to satisfaction with all of life's domains and subdomains" (Neal, Sirgy, & Uysal, 1999, p. 154). In 2004, Neal and Sirgy (2004) further validated this model by demonstrating that there is a correlation between satisfaction with leisure life and satisfaction with life in general. A similar model was developed by Sirgy, Rahtz, Cicic, and Underwood (2000). whose model includes

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leisure as part of the "global satisfaction with other life domains" (Sirgy & Comwell, 2001; Sirgy et al., 2000).

1.2 Happiness and Leisure Activities

Increased satisfaction with leisure and higher frequency of participation in leisure activities positively correlate with life satisfaction (Lloyd & Auld, 2002). Others also find that participating in leisure activities has a positive correlation with life satisfaction (Baldwin & Tinsley, 1988; Dowall, Boiler, Flett, & Kammann, 1988; Wankel & Berger, 1990). Research efforts to date tend to focus on the total frequency of a group of leisure activities on either happiness or leisure satisfaction. However, not enough attention has been paid to the effect of specific leisure activities on happiness. Whenever a happiness study does address leisure activities, it usually involves one specific leisure activity, such as listening to music (Laukka, 2007) or watching television (Bruni & Stanca, 2006, 2008; Delle Fave & Bassi, 2003; Frey, Benesch, & Strutzer, 2005).

The majority of leisure studies are cross-sectional; therefore, it is difficult to determine cause and effect.

1.3 Happiness and Tourism

Specifically addressing the component of holiday trips, several studies have examined its correlation with happiness (Gilbert & Abdullah, 2002, 2004; Milman, 1998; Neal, 2000; Neal & Sirgy, 2004; Neal et al., 1999). Milman's study, based on a sample of senior citizens, shows that holiday trippers are not happier after their holiday (Milman, 1998). Nawijn (2007) finds a low, but positive, correlation between holiday trips and happiness. His findings confirm those of Gilbert and Abdullah (2004) and Neal and Sirgy (2004), who conclude that holiday trips positively influence the sense of well-being of tourists. On the other hand, not every study finds only positive consequences of holiday tripping. High job stress, caused by work not being done during the vacation, for instance, is associated with poorer well-being (Strauss-Blasche, Ekmekcioglu, & Marktl, 2002). Returning to work where one finds more work piled up compared to the prevacation period results in higher levels of stress.

None of the aforementioned studies measured both happiness and tourism over a long period of time. Thus, cause and effect are not always clear.

1.4 Aim of This Chapter

In this chapter, we try to disentangle cause and effect in the relationship between happiness and leisure activity and seek an answer to the following questions: What is the effect of leisure activities on happiness? Do holiday trips have a bigger impact than other leisure activities? And finally, does everyone benefit from these activities'?

The purpose of this chapter is to determine the effect of leisure activities on happiness in terms of strength and cause and effect. This study clarifies which leisure activities increase happiness. Over-time correlations were calculated, to be certain that happy people did not participate more in leisure activities in general. Additionally, to further determine the cause-effect relationship, all effects were controlled for by demographic variables and personality.

2 METHOD

These questions are answered by means of data of the German Socio-Economic Panel Study (SOEP), which were made available to us by SOEP at the German Institute for Economic Research (DIW Berlin). Four waves of that study involved questions about leisure activities. The longitudinal design allows the separation of cause and effect and rich background variables allow a check for possible spurious correlation.

2.1 Data

SOEP is a large-scale representative panel of private households, which exists since 1984. Participants are interviewed once a year. Leisure activities are not automatically included in the questionnaires but were included in the waves of 1990, 1995,

1998, and 2003. The wave of 1990 consists of ~9,500 West Germans and 4,300 East Germans. The 1995 wave holds ~13,600 people, the 1998 wave ~14,500 people, and the 2003 wave ~20,400. The panel consists of Germans living in the former eastern and western part, foreigners and recent immigrants to Germany. SOEP contains 18 main topics including "health," "education and qualification," "job market and occupation," and "socialization." The topic "Basic orientation, participation, and integration" includes measures of subjective well-being.

2.2 Variables the Following Variables are Used

2.2.1 *Dependent Variable: Life Satisfaction*

The dependent variable of the present study is *life satisfaction*, which we define as "the overall appreciation of one's life as a whole." This concept is delineated in more detail in Veenhoven (1984) and is also labeled as "happiness." The focus of this chapter is on *present* satisfaction with life.

Life satisfaction is measured using a self-report on a single question: "And finally, we would like to ask you about your satisfaction with your life in general. Please answer by using the following scale, in which 0 means totally unhappy, and 10 means totally happy." The exact question was phrased as: "How satisfied are you at present with your life as a whole?" This question is in SOEP's core questionnaire and responses are, therefore, available for all respondents in all years.

2.2.2 *Independent Variable: Leisure Activities*

The 1990 wave of the SOEP study included the following leisure activities: *go out to eat or drink, visit neighbors, visit family member, play card and board games, participate in local politics, perform volunteer work, attend church or other religious events, watch television, video, read nonfiction and fiction, engage in artistic and musical activities, perform handicraft and home repairs, participate in sports, attend sports event, attend cinema, pop. jazz concerts and attend cultural events*. The East German data did not contain the variable of *holiday trips*, but included two different activities: *attend community events* and *attend social gatherings*. The 1990 data for East Germany contain only a small range of leisure activities (6 out of the 15) which were used in the West German sample. For this reason, the East German data were excluded from analysis. The 1995 wave included the same leisure activities as the 1990 West German wave. The 1998 wave omits *play card and board games, engage in artistic and musical activities, perform handicraft and home repairs* and *read nonfiction and fiction*. The 1998 wave contained some new activities, namely, *private personal computer use, tinkering and garden work, car repairs* and *attend opera/classical concerts and theater*. The 2003 activities were almost the same as those of 1998, with just one addition: *private internet usage*.

2.3 Holiday Trips

The focus of this chapter is on "holiday trips," i.e., day trips and short holidays. This independent variable was part of the SOEP study in 1990 (West Germany), 1995, 1998, and 2003. The wording of the questions and answers slightly varies over the years. In 1990 and 1995, the following phrasing was used: "Now some questions about your free time. How frequently do you undertake the following activities?" Then several items were listed, among which were outings or short trips. This variable contained the following choices: "daily, once a week, once a month, less than once a month, never." In 1995, instead of asking how frequently one participated in the activities, the question was as follows: "Please indicate how often you engage in the following activities: daily, at least once a week, at least once a month, less often or never." The responses were equal to the ones pointed out in the question itself. The name of the variable had "excursions" added to it: outings, excursions, short trips. Again, in 2003, some minor changes were made. The question was rephrased as: "Please indicate how often you take part in each activity: daily, at least once a week, at least once a month, seldom, or never." with corresponding answers. Finally, the variable was renamed: go on a trip or short holiday.

2.2.3 Control Variables

To ensure that correlations between leisure activities and happiness are not driven by a common third variable, personality, health and socio-demographic variables are used as control variables.

Personality

The "big five" most important personality traits are: extraversion, agreeableness, conscientiousness, neuroticism and openness to experience (McCrae & John, 1992, p. 175). The SOEP study includes measures of these five dimensions (Dehne & Schupp, 2007). As personality traits are deemed fairly stable (Costa & McCrae, 1994; Gustavsson, Weinryb, Goransson, Pedersen, & Åsberg, 1997; Hampson & Goldberg, 2006; McCrae & Costa, 2003; Terraciano, Costa, & McCrae, 2006), the 2005 measurement is used for each year of analysis.

Health

Health is measured as the total number of doctor visits in the past 3 months.

Socio-demographic Variables

Age, sex, marriage, education, work and income are the socio-demographic variables used in this study. Income is defined as the average gross amount of salary.

2.4 Analytic Approach

We started with a same-time analysis to see whether happiness and leisure activities are related. Next, we did an over-time comparison to get an idea about cause and effect.

The same-time analysis was done using Pearson correlations. First, we computed simple zero-order correlations for assessing to what extent happiness goes together with leisure activities. To check whether these same-time correlations are spurious, we also computed partial correlations. Over-time correlations were used to gain an insight into cause and effect and to determine the duration of effects. Again, we computed both zero-order and partial correlations. Missing values were deleted list-wise. Each wave contained ~500 cases with missing values, the final wave ($n = 22,400$) had more missing values, namely ~2,000 cases.

3 RESULTS

Correlations for each of the four waves are presented in the appendices to this chapter. [Table 4.1](#) presents the average correlation across all four waves. These averages were computed as a weighted mean, whereby the weights were equal to the inverse variance of each wave's effect estimator.

3.1 Same-Time Zero-Order Correlations

Just five leisure activities (LAs) have significant correlations with life satisfaction (LS). The LAs with significant correlations are *holiday trips*, *attending church*, *handicrafts*, *home repairs* and *attending cultural events*.

The leisure activity with the largest correlation each year is *holiday trips* (shown in [Appendix 1](#)). The waves of 1990, 1995, 1998 and 2003 have effect sizes of .15 ($p < .01$), .15 ($p < .01$), .18 ($p < .01$) and .19 ($p < .01$), respectively. Thus, the effect sizes are rather similar for each wave. On top of that, *holiday trips* is the only leisure activity which has a significant effect each year. Three of the other activities do not have a significant effect each year, but their mean effects are significant. The leisure activities that have significant mean zero-order correlations are *holiday trips*, *attending church*, *handicraft*, *home repairs* and *attend cultural events*.

3.2 Same-Time Partial Correlations

When examining the mean partial correlations (shown in [Table 4.1](#), Column 3), it is immediately obvious that, out of the four significant mean zero-order effects, just one remains significant. Beyond any doubt, *holiday trips* is the most important leisure activity with mean partial effect sizes of .11 ($p < .01$), .09 ($p < .01$), .19 ($p < .01$) and .16 ($p < .01$). *Holiday trips* is the only leisure activity that has an independent effect on happiness: all the other mean zero-order correlations are no longer significant after controlling for *age*, *sex*, *marriage*, *education*, *work*, *income*, *personality* and *health*. The size of the correlation is small but considerable: *holiday trips* accounts for ~2% of the variance in life satisfaction.

3.3 Over-Time Correlations

This leaves us with the question of cause and effect: do holiday trips make us happier? Or, does happiness make us take holiday trips? To answer these questions, we did an across-time comparison. Since the SOEP study involves annual interviews, the minimal period we can use is 1 year.

3.4 Does Life Satisfaction Predict Leisure Activity 1 Year Later?

Could it be that happiness is the cause, happy people being more open to fun? This does not seem to be the case, as life satisfaction scores do not predict leisure activity scores 1 year later. The correlation is in fact negative, suggesting that it is unhappiness that predisposes people to take a holiday trip (see Column 4 in [Table 4.1](#) and the detail in [Appendix 2](#)). No leisure activity has a consistent significant over-time correlation with the preceding life satisfaction score.

Does Leisure Activity Predict Life Satisfaction 1 Year Later?

Is the same-time correlation due to an effect of holiday trips on happiness? The over-time correlation is positive (.01) but does not reach statistical significance. So if there is an effect of holiday trips on happiness, it is apparently short lived and hardly visible anymore after a year. None of the leisure activities have consistent significant correlations with life satisfaction in the following year (see Column 5 in [Table 4.1](#) and the detail in [Appendix 3](#)).

4 DISCUSSION

4.1 Do Holiday Trips Boost Happiness?

Probably, but not certainly. People who did a trip a year appear to be somewhat happier in that year, and this applies to all kinds of people: working or not, an extrovert or an introvert, healthy or sick, rich or poor, married or single, and old or young. Still, it is not established that this correlation is due to an effect of holiday trips on happiness or an effect of happiness on holiday taking. None of these effects is reflected in significant correlations after 1 year, but these correlations of earlier trips on later happiness are positive, while the correlation of earlier happiness on later trip tends to the negative.

Suppose that the effect of holiday trips on happiness is the main driver of the same-year correlation. Holiday trips then have a short-lived effect on happiness. Is this effect big enough to be important? The answer to that question should be "yes." A 2% increase in happiness may not seem like a lot as such, but it is, when compared to other methods to increase happiness (Seligman, Steen, Park, & Peterson, 2005). Unlike this study, Seligman et al.'s study included people who were eager to improve their happiness. Even so, some of their techniques were less successful. Their positive intervention of gratitude visits had an effect size of .06 after 1 month (Seligman et al., 2005, p. 417), which is lower than the .14 effect size of holiday trips. Otake, Shimai, Tanaka-Matsumi, Otsui and Fredrickson (2006) conducted a study on counting kindness, among women. Their counting kindness intervention increased happiness by .44 on a seven-point scale (Otake et al., 2006), which is equal to a .06 effect size, much lower than the .14 of holiday trips. Apart from the smaller effect, women are also more attuned to kindness (Baskerville et al., 2000). The "identifying signature strengths" intervention technique (Seligman et al., 2005) has an effect size of .25 at the immediate post-test, which is higher than the effect size of holiday trips, but its effect is short lived as there is only immediate gratification (1 week post-tests were not significantly different from the control group).

These positive interventions were intentional activities. What if we compare the importance of holiday trips to an unintentional event? According to Lyubomirsky et al. (2005), unintentional activity makes up about 10% of happiness. One unintentional event may be a "medium-sized" lottery win of £50,000. Such a financial windfall increases happiness by ~3% (Gardner & Oswald, 2001, p. 7). (When dividing Gardner and Oswald's 1.09-point increase on their 36-point scale.) We should compare this to the uncontrolled effect of holiday trips, as Gardner and Oswald did not control their effect either. When doing so, we discover that winning £50,000 is less beneficial than going on a few holiday trips in a year. Additionally, the effect of the lottery win does not even have immediate gratification; it takes 2 years to take full effect. It seems that going on a holiday trip several times a year has a much bigger effect than winning £50,000 in the lottery, with the additional benefit of getting an immediate reward instead of having to wait for 2 years.

We argue that going on holiday trips is more beneficial for one's happiness in terms of intensity and duration compared to techniques such as "identifying signature strengths," "counting kindness" and "gratitude visits," especially as these studies involved people more attuned to the measurement (Otake et al., 2006) or more eager to increase their happiness (Seligman et al., 2005). Going on a holiday is just as beneficial, or even more so, than some positive intervention techniques (Seligman et al., 2005) and financial windfalls (Gardner & Oswald, 2001).

4.2 Why No Effect of Other Leisure Activities?

This study finds that out of all leisure activities, only *holiday trips* boost happiness. None of the other leisure activities have a significant effect on happiness. This finding partly contradicts previous findings by others (Brown, Frankel, & Fennell, 1991; Hills & Argyle, 1998; Suh & Diener, 1996). The cause of this probably lies in that fact that the leisure activities all seem to fall into the category of casual leisure (Stebbins, 2007). Two other categories, project-based leisure and serious leisure (Stebbins, 2007), which may be more beneficial to one's happiness, particularly if used purposefully (Winefield, Tigermann, & Winefield, 1992) and in congruence to their personality (Melamed, Meir, & Samson, 1995) are not included in the data.

Additionally, the measurement level is likely to be the cause of some of the nonsignificant correlations, for instance, with watching TV. Other studies (Bruni & Stanca, 2006, 2008; Delle Fave & Bassi, 2003; Frey et al., 2005) found that watching TV negatively influences happiness. As most people watch TV daily, no distinction could be made between heavy users and regular viewers. This most likely explains the absence of significant correlations regarding watching TV in this study.

4.3 Limitations

The SOEP data have some limitations. The biggest limitation is that leisure activities are not measured every year. When measured, they are measured just once a year. Furthermore, the measurement level of the leisure activities is ordinal, and the categories are not very well chosen. This may have caused inaccurate reports as certain answers are not possible (e.g., twice a month). Future studies should incorporate more accurate methods of measuring leisure behavior. Another point of criticism is the choice of leisure activities. Some activities seem illogically combined into one variable (*attend cinema, pop, jazz concerts*) whereas others appear to have been excluded completely (*playing computer games* or *visiting museums*).

4.4 Further Research

Short-Term Follow-up

If holiday trips have a causal effect on happiness, that effect is apparently shorter than 1 year. To capture the short-lived effect, we need follow-up studies at shorter intervals, preferably every month. It is in the interest of the travel industry to fund such research.

Further Analysis of SOEP Data

Two facets of the SOEP data have not been analyzed yet. One is the total frequency and diversity of leisure activities. Do people with a wide range of leisure activities benefit more, in terms of happiness, than people with a small range of activities? The same applies to the total frequency of leisure activities; does a high frequency of leisure activities boost happiness? The other facet is the moderating effect of demographic criteria. We now know that everyone benefits, but do certain people benefit more than others from going on holiday?

Optimal Tourist Lifestyle

The interesting thing about holiday trips is that you start enjoying the experience before it actually starts. There is clearly an anticipation effect (Ryan, 1991). In that sense, it is quite a different experience from some of the aforementioned intervention techniques.

Also, the findings presented in this study are based on current behavior. Further work needs to be done to establish whether this current behavior is optimal, in the sense that it maximizes the potential happiness boost it generates. Future research should, therefore, focus on finding out what an optimal tourist lifestyle could be. Taking short holiday trips may be particularly favorable when more evenly spread over the year. Further analysis of different tourist lifestyles is a must. Finally, future research needs to determine the exact duration of the effect of holiday trips.

5 CONCLUSION

Happy people report more holiday trips in the past year, probably because holiday trips boost happiness. Though the effect is short lived, it is substantial, accounting for about 2% of the variance in happiness. Holiday trips affect happiness more than other leisure activities.

Table 4.1 Correlations between leisure activities and life satisfaction

Leisure activities	Same-time correlations		Over-time correlations	
	r	Partial r ²	LS →.LA	LA →.LS
Holiday trips	.18**	.14**	-.01	.01
Eating and drinking	.05	-.01	.02	.01
Visiting neighbors	.06	.01	.01	-.01
Visiting family	.04	.01	.00	.00
Card and board games	.03	.02	-.03	-.01
Local politics	-.19	-.01	-.02	.00
Volunteer work	.02	-.01	.03	.00
Attend church	.03*	.01	.01	.00
Watch television, video	.00	.01	.01	.00
Private computer use	.00	-.01	.00	-.01
Private internet use	.00	-.01	-.01	-.01
Reading	.03	.00	-.01	-.02
Artistic, musical activities	.02	.01	.01	-.02
Tinkering and garden work	-.02	-.01	.02	.00
Car repairs	-.01	-.01	.01	.01
Handicraft, home repairs	.03**	.01	-.02	-.02
Participate in sports	.03	.00	-.01	-.02
Attend sports events	.02	-.01	.01	-.01
Attend cinema, concerts	.02	.00	.01	-.02
Attend opera, theater	.01	-.02	.01	.00
Attend cultural events	.02*	.00	-.00	-.03

LS Life satisfaction ; LA Leisure activities *p<.05; **p<.01 ^aPartial correlation is controlled for age, sex, marriage, education, work, income, personality and health

Appendix 1. Same-Time Correlations of Leisure Activities and Life Satisfaction

Leisure activities	<i>r</i>				Partial <i>r</i> ²			
	1990	1995	1998	2003	1990	1995	1998	2003
Holiday trips	.15**	.15**	.18**	.19**	.11**	.09**	.19**	.16**
Eating and drinking	.08**	.00	.04**	.05**	.01	.00	-.03	-.02
Visiting neighbors	.07**	.02	.03**	.02**	.06**	.01	-.01	-.02
Visiting family	.05**	.01	-.01	.00	.03	.00	.01	-.03
Card and board games	.06**	-.01	-	-	.05**	-.02	-	-
Local politics	.03**	.00	-.01	.01	.01	.00	-.02	-.02
Volunteer work	.06**	.02**	.02*	.02**	.01	-.03	.01	-.02
Attend church	.05**	-.02	.06**	.04**	.06**	-.04**	.00	.02
Watch television video	.02**	.01	-.02*	-.01*	.04*	.01	-.01	.01
Private computer use	-	-	.00	.03**	-	-	-.01	-.01
Private internet use	-	-	-	.03**	-	-	-	-.01
Reading	.07**	-.01	-	-	.02	-.02	-	-
Artistic, musical activities	.07**	-.02*	-	.03**	.05**	-.02	-	.01
Tinkering and garden work garden work	-	-	-.02*	-.01	-	-	-.02	-.01
Car repairs	-	-	-.01	-.01*	-	-	.00	-.02
Handicraft,home repairs	.07**	.03**	-	-	.04*	-.02	-	-
Participate in sports	.12**	-.01	.00	.03**	.05**	-.02	.00	-.03
Attend sports events	.07**	-.01	.01	.02*	.02	.00	-.01	-.03
Attend cinema, concerts	.07**	.00	-.01	.01	.01	.02	.00	-.02
Attend opera, theater	-	-	.00	.04**	-	-	-.03	-.01
Attend cultural events	.07**	-.02*	.00	-	.02	-.01	.00	-

'-' = No measurement **p*<.05; ***p*<.01 ^aPartial correlations are controlled for age, sex, marriage, education, work, income, personality and health

Appendix 2. Over-Time Partial Correlations of Earlier Life Satisfaction and Later Leisure Activities

Leisure activities	1989-1990	1994-1995	1997-1998	2002-2003
Holiday trips	.02	-.01	.00	-.01
Eating and drinking	-.03*	-.01	.01	.01
Visiting neighbors	-.02	.002	.00	-.01
Visiting family	.02	-.02	.01	.00
Card and board games	-.01	-.02	-	-
Local politics	.00	-.01	.01	.01
Volunteer work	-.01	.01	.01	-.01
Attend church	.01	.00	-.01	.00
Watch television, video	.00	.01	-.02	.02
Private computer use	-	-	.00	-.01
Private internet use	-	-	-	-.01
Reading	.00	-.04**	-	-
Artistic, musical activities	-.03	-.05**	-	-.01
Tinkering and garden work	-	-	.00	.01
Car repairs	-	-	.01	.01
Handicraft, home repairs	-.03	.00	-	-
Participate in sports	-.05**	-.03*	.00	-.01
Attend sports events	-.03	-.01	.00	-.01
Attend cinema, concerts	-.03	-.04**	-.01	.00
Attend opera, theater	-	-	-.01	.00
Attend cultural events	-.02	-.04	.01	-

'-' No measurement: Partial correlations are controlled for age, sex, marriage, education, work, income, personality and health * $p < .05$: ** $p < .01$

Appendix 3. Over-Time Partial Correlations of Earlier Leisure Activities and Later Life Satisfaction

Leisure activities	1990-1991	1995-1996	1998-1999	2003-2004
Holiday trips	.00	.04*	-.01	.00
Eating and drinking	.00	.04*	.02	.00
Visiting neighbors	-.01	.05*	-.02	.00
Visiting family	-.01	.02	.00	.00
Card and board games	-.03	-.03	-	-
Local politics	-.03	.00	-.04*	-.02
Volunteer work	-.01	.02	-.01	.01
Attend church	-.01	.03	.01	.01
Watch television, video	.01	.00	.00	.02
Private computer use	-	-	.00	.00
Private internet use	-	-	-	-.01
Reading	-.01	.00	-	-
Artistic, musical activities	.00	.03	-	.01
Tinkering and garden work	-	-	.02	.02
Car repairs	-	-	.03	.01
Handicraft, home repairs	-.01	-.04*	-	-
Participate in sports	.00	-.03	.01	-.02
Attend sports events	-.01	.02	.01	.01
Attend cinema, concerts	.01	.00	.02	.00
Attend opera, theater	-	-	.01	.02
Attend cultural events	.00	-.01	.00	-

'-' No measurement; Partial correlations are controlled for age, sex, marriage, education, work, income, personality and health * $p < .05$: ** $p < .01$

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